

ABSTRACT OF THE DISCLOSURE

In an optical recording/reproducing apparatus of the present invention, a semiconductor laser driver supplies a selected one of a plurality of drive currents, including at least a first-level drive  
5 current and a second-level drive current, to a semiconductor laser to control the emission of a laser beam by the laser. A current driver selectively outputs one of a plurality of increment currents to the laser driver in response to control signals, the plurality of increment currents including a first increment current supplied to the laser  
10 driver during an automatic power control process and a second increment current supplied to the laser driver during a special power setting process. A detection unit detects a first power sample signal, at a first sampling point of a laser driving current waveform, from the laser beam emitted when the first increment current is supplied  
15 to the laser driver, and detects a second power sample signal, at a second sampling point of the waveform, from the laser beam emitted when the second increment current is supplied to the laser driver. A calculation unit calculates a derivative efficiency of the laser based on the first and second power sample signals detected by the  
20 detection unit, so that the drive currents of the laser driver, supplied to the laser, are controlled based on the calculated derivative efficiency.